

Sadler Fire Outline

- **Introduction**

- Saturation learning
- Direct cause and effect
- Actual life experience

- **Objectives**

To learn from the past. This lesson gives us the opportunity to discuss a situation in which Experienced and Non-Experienced firefighters failed to see the big picture. They were focused on the task at hand and did not properly use the rules of engagement or L.C.E.S. The span of control was not monitored, both radio and face to face communications broke down.

- **Summary**

slide #1

Aug. 9th, 1999. Six firefighters from a park service crew were entrapped by a wildland fire as they conducted a backfiring operation on the Sadler Complex in Elko, NV. All six firefighters were hospitalized and treated for smoke inhalation. Two of these firefighters were treated for 1st and 2nd degree burns to the left side of their faces and necks. The rest of the firefighters were released that same day.

- **Investigation Team**

- Fire and Aviation Safety Team (Reno, NV 8/9)
- Asked to go to Elko to check out smoke inhalation report on Sadler Complex
- After looking into the situation this group felt it needed more investigation.
- 8/10 NV State office converted into **Serious Accident Investigation Team.**

- **Incident Management Team**

- 8/6 type 3 team
- 8/6 fire area turns into complex
- 8/7 Type 2 team takes over
- 8/9 Type 1 team takes over.

- **The Crew**

Type 2 National Park Service Crew from California. The crew, was assembled on August 5 in San Francisco from Park Service employees from all over California,

8 of them where primary firefighters

5 work in fuels related jobs

8 where non fire personnel

For 5 of these crew people it was their first fire assignment

- **The Fire and Weather**

A Red Flag warning had been issued for August 9 for high winds, low relative humidity, and unstable atmospheric conditions. Little emphasis was placed on weather or fire behavior at the morning briefing. In the Incident Action Plan (IAP) the fire behavior for the day called for high rates of spread. Dry conditions with increasing south winds in the afternoon. Minimum RH 6 to 12, a Haines Index of 6, and fine fuel moisture of 3 percent. Also the IAP was not complete, it had several mistakes, and there was not enough copies for everyone.

- **Time Line**

8/9 0600 am Briefing at main camp by the Incident Management Team (IMT) and at the Jiggs spike camp by the Branch II Director.

Slide #2

The Incident Action Plan (IAP) was incomplete, it contained a number of mistakes and there was not enough for all fire line supervisors.

Incomplete briefings ?

The Operations Section Chiefs had instructed the branch directors to formulate the plan for the branches in the field.

The resources at the Jiggs camp were told to meet at the Big Safety Zone west of Indian Well near the northeast corner of the fire.

800 AM The NPS Crew bus broke down 8/10th of a mile from the Big Safety Zone. They had to hike to the briefing area.

Slide # 3

At the Big Safety Zone the NPS crew met up with 2 Hot Shot crews, engines, and 2 dozers.

900 AM Briefing at the Big Safety Zone

The Plan,

Burn the road north from the Big Safety Zone to Y Safety Zone then across dozer line to Black Safety Zone. (at this time a 2 ½ mile section of line/road south of the Big Safety Zone was **not secure** and the main fire in this area was active.)

secure anchor point ?

Hot Shots say no to this assignment The Crew Sups headed south of the Big Safety Zone to scout the unsecured line.

Span of control ?

During the day many resources arrived on the division, some with- out assignments or briefings. The Division Supervisor reported being swamped with radio traffic, the number of resources reporting, the number of resources just turning up, and problems with dozer fuel.

Operations were delayed in part by the heavy work load he faced.

Slide # 4

Hot Shot Sups return and take their crews south of the Big Safety Zone to secure line coming north.

Right crew for the job ?

NPS crew boss talks to Div & Branch. He tells them that his crew has burn experience and can do the assignment if some more Safety zones were made.

100 PM Go with the burn.

back 1 Slide

NPS crew moved to Y. Then hike to Black Safety Area

Good escape route ?

On the hike the crew sees 4 safety zones that were added. This made the total number of safety zones to 6. They were an average of 1370 feet apart.

2 engines and the Div & Branch met at Black Safety Area along with the dozers.

200 PM Black Safety Area

The Crew holds safety briefing then lines out to start the burn out.

Time of day ?
Wx forecast ?

At this time the winds became unfavorable. So the crew holds up.

Div & Branch made plans. Looking at the main column, they felt the need to burn or they would lose the line. Their new plan was to move back to the Y intersection.

Crew vs Assignment ?

The crew boss briefs the crew on the new plan. At this time he decides to leave 15 crew members behind at the black safety area. Because of experience levels and physical fitness levels.

Slide # 5

2:30 p.m.

At this time the Crewboss with 3 firefighters and the DIVS drove back to the Y intersection. On the way they met up with a FOBS and an unassigned DIVS. They were asked to help by keeping an eye on the burn show.

One Engine came with this group for support.

3:00 p.m.

The crew unloaded and started burning to the west with the Eng. in support.

Anchor point,
Communication,

The fire line southeast of the Y was not secure yet. Because of the hills to the south of the dozer line no one could see the main fire. There was also no aircraft over the burn show. At 3:00 p.m. they are lighting during the heat of the day.

Fire Info ?

The crew started burning 4 deep but the fire burned so fast that only one torch was needed. The fire burned hot and fast pushing the burn crew along quickly.

The crew had to move along the dozer line quickly and the DIVS told them not to out distance their support. At this time the DIVS returned to the Y intersection to arrange for Dozer fuel.

Wx?

The backfire went well with 2 foot flame lengths in grass and 6 feet in sage. The burn crew had encountered several wind shifts that forced them away from the line or to speed up the lighting. The crew had to walk very fast to stay ahead of the fire sometimes they were at a trot.

3:15 p.m.

The Engine was busy picking up spot fires and slop overs. there where a number of spot fires and the eng. boss radioed for the firing to stop. There was no response.

Communication ?

At this time there where two burnout operations and the backfire show working on the same tactical frequency. The TAC channel was heavily overloaded and the command channel was clogged with logistics traffic.

3:30 p.m.

slide #6

When the crew was about halfway an NDF eng. showed up with 2 crewmembers that had been to town for boots.

Span of control ?

The Eng. left and the crew members stayed with the firing crew to make a total of 6.

The crew had to start burning again. The fire activity was starting to pick up as the main fire approached.

3:40 p.m.

The Branch dir. and 2 dozer bosses where watching the burn crew from about 3 tenths of a mile away. As the main fire neared the burn crew they saw a “ river of fire” take off from the hills moving toward the dozer line. They tried to contact the burn crew by radio but receive no answer.

slide #7

As the main fire approached the dozer line a fire whirl started and crossed the line. Many spot fires started and grew quickly.

The Eng. that had been in support was unable to keep up and was cut off by the fire whirl. They pulled into a safety zone and waited out the fire.

The crew watched the whirl cross the line behind them. They talked about picking up the spot but the crew boss yelled “ Lets, Go, Go , Go “ the crew started lighting, but had made it only 90 feet when they noticed a wall of fire closing on them. The crew boss yelled stop burning “GO, GO, Go, run”.

They ran hard down the dozer line to the west. a wall of flame forced them to the green and smoke cut them off from each other.

One crew member ran hard down the line with extreme heat to the left side of his face. He had seen a safety zone 600 feet away and ran hard for it. he receive 2nd degree burns.

The second person also ran down the line till the heat forced him into the green. He ran at an angle to the safety zone he had seen. Smoke obscured his vision and he started to remove his

pack as he was running to get at his fire shelter. A sudden wind shift cleared his view and he was able to make it to the safety zone.

The third person ran into the green dropping his pack and pulling his fire shelter. The heat and smoke forced him to the ground. He tried to stand once but the heat kept him on the ground. He heard some one call for help but was unable to move. When the wind shifted he was able to make it to the safety zone to join the others.

The crew boss after giving the order to run was hit by the heat and smoke and dove into the green next to the 3rd crew person. He also made it to the safety zone after the wind shift.

Number 5 was lighting when the order to run was given. He tried to help the other lighter extinguish the torch then he dropped it and started to run. The heat and smoke forced him into the green with the others he pulled his fire shelter all the way out but did not have time to get in it. When the wind shifted he was able to make it over to the other crew member that was lighting and together they made it to the safety zone.

400 p.m. All six firefighter will move from this safety zone to another one farther from the escaped fire.

Two of the firefighter were flown to the ICP the went by ambulance to the hospital in Elko. The rest of the crew was flown to Indian Wells then to Jiggs Camp where they went by bus to Elko.

Dozers, engines, and crews worked to flank the escaped fire at just over a mile from where it had jumped the line. The fire ended up being two miles from the Lucky Nugget subdivision.

Lessons Learned:

Backfiring the head of a 170,000 acre fire in the afternoon during a red flag warning and extreme fire conditions was a hazardous tactic. A squad from a moderately experienced type 2 crew supported by one engine was a poor choice of forces for that action. Anchoring and flanking with dozers, handcrews, engine support and aerial supervision was the only reasonable tactic on a day when extreme fire behavior was predicted. The line that was backfired was unsecured behind the firing squad, and the firing was not directly supervised by anyone from the management team.

Briefings:

The weather forecast and the fire behavior forecast were not given adequate consideration.

The briefing held before the lighting operation failed to recognize lookouts, communications, and chain of command. Though escape routes and safety zones were established and identified, the safety zones were too far apart for the conditions.

Span of Control:

The unit log for this shift showed 14 engines, 2 water tenders, 3 handcrews, 4 dozers, 5 dozer bosses, 2 division supervisors, 1 division supervisor trainee, 1 field observer, and 1 safety officer. This is a lot of resources for one division supervisor to manage even if the IAP had been complete and assignments clear. This was not the case.

Communication:

At this time there were two burnout operations and the backfire show working on the same tactical frequency. The TAC channel was heavily overloaded and the command channel was clogged with logistics traffic.

Two Hotshot crews recognized the hazards in burning the unsecured dozer line at the head of the fire and insisted on securing the east flank first. This should have raised questions for the division supervisor.

During the backfire operation, the fire forced the squad to move so fast that they were not able to bring the black with them as a safety area. This should have been a warning to everyone involved that the situation was becoming hazardous.